

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	KUO ET AL.	Examiner:	P. HAILEY
Serial No.:	10/820,345	Group Art Unit:	1793
Filed:	APRIL 7, 2004	Docket No.:	8688.339US01
Title:	COMPONENTS AND METHOD FOR SURFACE TREATMENT OF PIGMENTS		

DECLARATION UNDER 37 C.F.R §1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

I, Ping-Lin Kuo, declare as follows:

1. I am one of the co-inventors of the invention claimed in the above-identified patent application.

2. I have reviewed, and understand, U.S. Patent 3,326,827 ("*Mullin*").

3. As a highly volatilizing solvent and a good drying agent, acetone would immediately vaporize in ambient atmosphere so that dried epoxide-treated TiO₂ can be straightforwardly and quickly obtained without heating.

4. In fact, acetone, which is commonly used as a solvent, would impose hazard to the user because of its extreme flammability. For example, as acetone's flash point is -20°C, an air mixtures of between 2.5% to 12.8% acetone by volume may explode or cause fire if the temperature is higher than -20°C. See, for example, the article "Acetone" of Wikipedia under the section "Safety" (<http://en.wikipedia.org/wiki/Acetone>, as accessed on 22 January 2009). Therefore, any skilled person in the art would take caution not to use any heating means if he intends to use acetone as a solvent for the mixture.

5. As acetone is used as a solvent for the surface-treatment of pigment, the slurry of pigment in acetone containing additive for treatment is usually milled to well disperse the pigment, and the acetone is dried during milling. In order to illustrate this phenomenon, I conducted an experiment like in the *Mullin* patent recently as follows: 150 grams of TiO_2 was added into 400 c.c. of acetone containing 1.5g linseed oil. As this mixture was milled, the acetone spontaneously vaporized (volatilized) and the mixture became paste and then dried into powders during milling without heating. The temperature of the mill remained unchanged at room temperature, 24°C, during milling. In Mullin patent (column 4, line 20), the mixture was dried/milled, and nothing indicates the mixture was heated or was dried under elevated temperature.

6. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: Ping-Lin Kuo

Signature: _____

Date: _____

PL Kuo
5/11/2009